

Notice of Allowability

Application No.

09/642,575

Examiner

Anthony T Ton

Applicant(s)

GUNLOCK, RICHARD D.

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/13/2004.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ The drawings filed on 29 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>6/4/2004</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |


PHIRIN SAM
PRIMARY EXAMINER



DETAILED ACTION

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance:

a) **In Regarding to Claims 1-3:** The prior arts of record fail to teach an initiator node for a storage area network, the initiator node intended to be coupled over a storage area network to at least one storage node having command queue capability, the initiator node comprising a combination of steps of:

wherein the memory system stores

instructions for initializing the maximum queue depth for the at least one storage node to a value dependent on a type of the at least one storage node; and

instructions for dynamically adjusting the current queue depth associated with the storage node based upon queue refusals generated by the storage node and the maximum queue depth associated with the storage node.

b) **In Regarding to Claims 4-9:** The prior arts of record fail to teach a storage area network node, a method of controlling a maximum number of commands queued to a storage node, the method comprising a combination of steps of:

adjusting the current queue depth associated with the storage node downwardly when the current queue depth is greater than the minimum queue depth and the storage node refuses to queue a command issued by the initiator node; and

adjusting the current queue depth upwardly when the current queue depth is less than the maximum queue depth associated with the storage node and the storage node has not refused to queue any commands issued by the initiator node for a first predetermined period of time.

c) **In Regarding to Claims 10-19:** The prior arts of record fail to teach an apparatus having computer readable instructions, the apparatus comprising a combination of steps of:

first adjustment means for adjusting the current queue depth associated with the storage node downwardly when the current queue depth is greater than the minimum queue depth and the storage node refuses to queue a command issued by the initiator node; and

second adjustment means for adjusting the current queue depth associated with the storage node upwardly when the current queue depth is less than the maximum queue depth associated with the storage node and the storage node has not refused to queue any commands issued by the initiator node for a first predetermined period of time.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Examiner Information

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Anthony T Ton** whose telephone number is **571-272-3076**. The examiner can normally be reached on M-F: 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chau Nguyen** can be reached on **571-272-3126**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

by: *qub*
Anthony T. Ton
Patent Examiner
January 30, 2005



**PHIRIN SAM
PRIMARY EXAMINER**